



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Haseltine et al.

Docket No.: PF106P3D1

Application No.: 10/079,429

Filed: February 22, 2002

Art Unit: 1652

For: HUMAN DNA MISMATCH REPAIR  
PROTEINS

Examiner: N. T. Nashed

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR §§ 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to references A1-A57 listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR § 1.97(b)(3)).

Copies of references A52-A57 listed on the attached form PTO/SB/08 are enclosed.

Copies of references A1-A50 on the attached form PTO/SB/08 are not supplied because they were previously cited by or submitted to the Office in prior application number 08/465,679, filed June 6, 1995 and relied upon in this application for an earlier filing date under 35 U.S.C. § 120. A copy of reference A51 on the attached form PTO/SB/08 is not supplied because it was previously cited by or submitted to the Office in prior application number 08/294,312, filed August 23, 1994 and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

Application No.: 10/079,429

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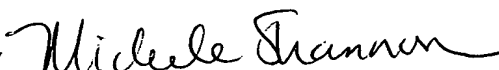
In accordance with 37 CFR§ 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. In accordance with 37 CFR § 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and the Examiner is respectfully requested to consider the listed references.

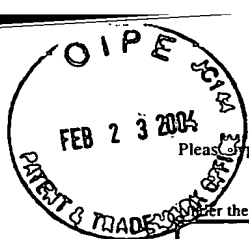
The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 08-3425.

Dated: February 23, 2004

Respectfully submitted,

By   
Michele Shannon

Registration No.: 47,075  
HUMAN GENOME SCIENCES, INC.  
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				<b>Application Number</b>	<b>10/079,429</b>
<b>Sheet</b>	<b>1</b>	<b>of</b>	<b>5</b>	<b>Filing Date</b>	<b>February 22, 2002</b>
				<b>First Named Inventor</b>	<b>Haseltine et al.</b>
				<b>Group Art Unit</b>	<b>1652</b>
				<b>Examiner Name</b>	<b>Nashed, N.T.</b>
				<b>Attorney Docket Number</b>	<b>PF106P3D1</b>

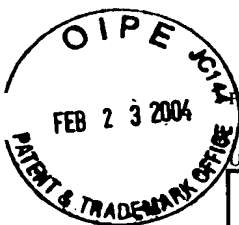
U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	08/154,792		KOLODNER ET AL. Priority Document -WO95/14085	11/17/1993	
	A2	08/163,449		KOLODNER ET AL. Priority Document - WO95/14085	12/07/1993	
	A3	08/259,310		KOLODNER ET AL. Priority Document -WO95/14085	02/22/1995	
	A4	08/352,902		LISKAY ET AL. Priority Document -WO95/16793	12/09/1994	
	A5	08/209,521		LISKAY ET AL. Priority Document -WO95/16793	03/08/1994	
	A6	08/168,877		LISKAY ET AL. Priority Document -WO95/16793	12/17/1993	
	A7	09/912,292		ROSEN ET AL	NOT PUBLISHED	pages 1-75 (pages 1 & 2 partially redacted); portion of Table 2; and SEQ ID NO: 25164
	A8	09/912,293		ROSEN ET AL	NOT PUBLISHED	pages 1-75 (pages 1 & 2 partially redacted); portion of Table 2; and SEQ ID NOS: 56075, 83809, and 103730
	A9	4,737,454		DATTAGUPTA ET AL.	04/12/1988	
	A10	5,124,443		COLELLA ET AL.	06/23/1992	
	A11	5,922,855		LISKAY ET AL.	07/13/1999	
	A12	6,191,268	B1	LISKAY ET AL.	02/20/2001	
	A13	6,380,369		ADAMS ET AL.	04/30/2002	
	A14	6,165,713		LISKAY ET AL.	12/26/2000	
	A15	6,416,984		HASELTINE ET AL.	07/09/2002	

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					<b>Attorney Docket Number</b>		<b>PF106P3D1</b>	
<b>FOREIGN PATENT DOCUMENTS</b>								
<b>Examiner Initials<sup>2</sup></b>	<b>Cite No.<sup>1</sup></b>	<b>Foreign Patent Document</b>			<b>Name of Patentee or Applicant of Cited Document</b>	<b>Date of Publication of Cited Document MM-DD-YYYY</b>	<b>Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear</b>	<b>T<sup>6</sup></b>
		<b>Office<sup>3</sup></b>	<b>Number<sup>4</sup></b>	<b>Kind Code<sup>5</sup> (if known)</b>				
	A16	WO	95/14085	A2	DANA-FARBER CANCER INSTITUTE	05/26/1995		
	A17	WO	95/14772	A1	MATSUBARA, K. and OKUBO, K.	06/01/1995	Abstract and SEQ ID Nos. 265 and 1856	
	A18	WO	95/15381	A2	THE JOHN HOPKINS UNIVERSITY	06/08/1995		
	A19	WO	95/16793	A1	OREGON HEALTH SCIENCES	06/22/1995		

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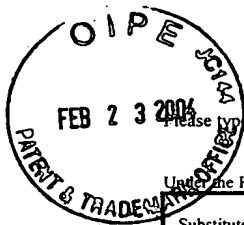
<b>OTHER REFERENCES - NON PATENT LITERATURE DOCUMENTS</b>			
<b>Examiner Initials</b>	<b>Cite No.<sup>1</sup></b>	<b>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.</b>	<b>T<sup>2</sup></b>
	A20	GenBank Accession No. D12046, (12/02/1992).	
	A21	GenBank Accession No. Z24775, (08/02/1993).	
	A22	GenBank Accession No. Z36291, (08/15/1994).	
	A23	Geneseq Accession No. AAT29623, (04/30/1996).	
	A24	Geneseq Accession No. AAT29624, (04/30/1996).	
	A25	Geneseq Accession No. AAT29625, (04/30/1996).	
	A26	Geneseq Accession No. AAT29626, (04/30/1996).	
	A27	Geneseq Accession No. AAT29627, (04/30/1996).	
	A28	Geneseq Accession No. AAT29628, (04/30/1996).	
	A29	Baker et al., Male mice defective in the DNA mismatch repair gene PMS2 exhibit abnormal chromosome synapsis in meiosis, <i>Cell</i> , 82:309-319 (1995).	
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	A33	Horii et al., Cloning, Characterization and Chromosomal Assignment of the Human Genes Homologous to Yeast <i>PMS1</i> , A Member of Mismatch Repair Genes, <i>Biochemical and Biophysical Research Communications</i> , 204; 1257-1264 (1994).	
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	A36	Leach F. S. et al., Mutations of a <i>mutS</i> Homolog in Hereditary Nonpolyposis Colorectal Cancer, <i>Cell</i> , 75:1215-1225 (1993).	
	A37	Lindblom et al., Genetic mapping of a second locus predisposing to hereditary non-polyposis colon cancer, <i>Nature Genetics</i> , 5:279-282 (1993).	
	A38	New et al., The yeast gene <i>MSH3</i> defines a new class of eukaryotic MutS homologues, <i>Mol. Gen. Gent.</i> 239:97-108 (1993).	
	A39	Nicolaides et al., Mutations of two <i>PMS</i> homologues in hereditary Nonpolyposis colon-cancer, <i>Nature</i> , 371:75-80 (1994).	

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet **4** of **5**

### Complete if Known

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### OTHER REFERENCES - NON PATENT LITERATURE DOCUMENTS

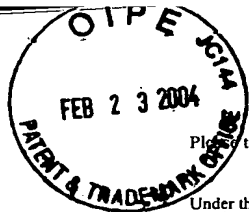
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A40	Nyström-Lahti, Mismatch Repair Genes on Chromosomes 2p and 3p Account for a Major Share of Hereditary Nonpolyposis Colorectal Cancer Families Evaluable by Linkage, <i>American Journal of Human Genetics</i> , 55:659-665 (1994).	
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	A43	Prolla et al., Dual Requirement in Yeast DNA Mismatch Repair for <i>MLH1</i> and <i>PMS1</i> , Two Homologs of the Bacterial <i>mutL</i> Gene, <i>Molecular and Cellular Biology</i> , 14:407-415 (1994).	
	A44	Prolla et al., MLH1, PMS1, and MSH2 Interactions During the Initiation of DNA Mismatch in Repair Yeast, <i>Science</i> , 265: 1091-1093 (1994).	
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	A47	Bronner et al., Mutation in the DNA mismatch repair gene homologue <i>hMLH1</i> is associated with the hereditary non-polyposis colon cancer, <i>Nature</i> , 368:258-261 (1994).	
	A48	Chauhan et al., Proficiency of Mismatch Repair Activity can be Retained in spite of low expression levels of the <i>hMLH-1</i> gene in the HCT 116 colon cancer cell line, <i>Gastroenterology</i> , Suppl. 110:A502 (1996).	
	A49	Dorland's Medical Dictionary, pg. 232 (1995).	
	A50	Goldberg et al., Models of Neoplasia and Their Diagnostic Implications: A Historical Perspective, <i>Clin. Chem.</i> , 39(11B):2360-2374 (1993).	
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	A52	Bera, TK et al., (1998) Cloning and characterization of <i>mutL</i> and <i>mutS</i> genes of <i>Vibrio cholerae</i> : nucleotide sequence of the <i>mutL</i> gene. <i>Nucleic Acids Res.</i> 17:6241-51.	
	A53	Risinger, JI et al., (1995) A hPMS2 mutant cell line is defective in strand-specific mismatch repair. <i>J Biol Chem.</i> 270:18183-6.	
	A54	Strand, M, (1993) Destabilization of tracts of simple repetitive DNA in yeast by mutations affecting DNA mismatch repair. <i>Nature</i> . 365:274-6.	
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	A56	PARSONS et al., "Hypermutability and Mismatch Repair Deficiency in RER <sup>+</sup> Tumor Cells," <i>Cell</i> , 75:1227-1236 (1993).	

Examiner Signature		Date Considered	
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	A57	Strand, M, (1994) Destabilization of tracts of simple repetitive DNA in yeast by mutations affecting DNA mismatch repair. <i>Nature</i> . 368:569.			

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